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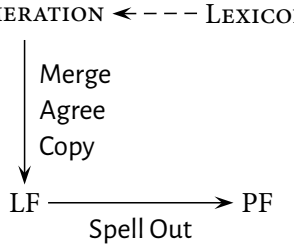
A summary of the theory

1 Structure of the grammar

- When we last saw our grammar, it looked like this:

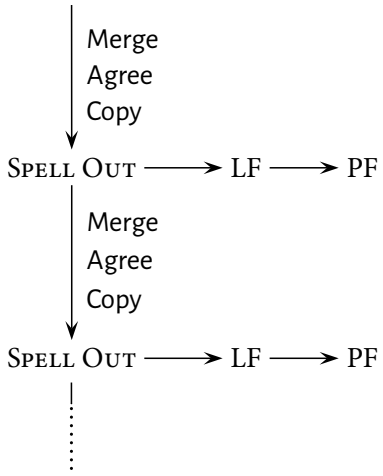
(1) *A Minimalist Grammar*:



- If we assume Phase theory, then a revised view might look like this:

Here, 'cyclic Spell Out' just means that Spell Out occurs regularly over the course of the derivation.

(2) *A Minimalist Grammar with cyclic Spell Out*:



- As before, the numeration is a multiset of lexical items drawn from the lexicon to be used in the derivation.

And we may enrich the numeration with lexical subarrays…

- Let's look at the state of the state of some other components of our grammar.

2 The interfaces and levels of representation

- There are two interface levels under Minimalist theory:

i. Logical Form, or LF, interfaces with the Conceptual–Intensional (C–I) interface.
   - The C–I interfaces with the meaning of an utterance.

ii. Phonetic Form, or PF, interfaces with the Articulatory–Perceptual (A–P) interface.
   - The A–P interface deals with the sensorimotor system, literally how language is physically manifested.

The A–P interface is, in fact, sometimes called the Sensorimotor Interface.

- These two levels of representation are thought to be *conceptually necessary*, insofar as they are required for any theory of language.
   - All well-formed linguistic utterances have both form and meaning.
   - If syntax is taken to be the way of linking form and meaning, then any convergent syntactic derivation must interact with the systems responsible for giving an utterance its form and meaning.
- We have otherwise eliminated any other level of representation from the syntax.
   - The GB levels of S-structure and D-structure have been eliminated entirely, on the grounds that they were only motivated theory-internally.
   - The work they did is redistributed to the Numeration, to Spell-Out, and to conditions enforced by the interfaces.
- To the extent possible, filters that once applied at the various levels of representation are now thought either to be the result interface conditions or economy conditions.

3 Phrase structure

- We made significant adjustments to our assumptions about phrase structure.
- We now assume that a head projects only when it must.
   - The operation Merge is responsible for creating all structure.
   - Specifier positions and intermediate projections only occur to accommodate the requirements of the head, following the Strong Endocentricity Thesis:

(3) *Strong Endocentricty Thesis*:
An expression E will establish a local grammatical relation (either spec–head, modification, or complementation relation) with a given head H only if E is immediately contained within projections of H.

(Hornstein et al. 2005: 198)

- Minimal, maximal, and intermediate projections are defined contextually, and we played with the notation of Bare Phrase Structure.
- Under binary branching, multiple specifiers are are possible, but a head may take only one complement.
- $\bar{X}$-structures can be derived in this system, but they are not taken as a primitive, nor must every head project one.

I have, though, reverted back to drawing $\bar{X}$-esque trees, largely because it is easier to see generalizations in them. It is implicit in these trees, however, that the head and the label are not distinct.

- The Linear Correspondence Axiom proposes that phrase structure be mapped to linear orders using asymmetric c-command.

(4) *Linear Correspondence Axiom*:
A lexical item α precedes a lexical item β iff
   i. α asymmetically c-commands β, *or*
   ii. a maximal projection dominating α c-commands β.

Kayne 1994

4 Theta criterion

- This is, perhaps, the part of the theory that has changed the least since we began.
- The Theta Criterion is still thought to hold:

(5) *Theta Criterion*:
Each argument bears one and only one θ-role, and each θ-role is assigned to one and only one argument.

Chomsky 1981

- We are continuing to assume θ-roles are assigned at (first) Merge.

(6) *Theta-Role Assignment Principle (TRAP)*:
θ-roles can only be assigned under a Merge operation.

Now that movement is Copy + Merge, however, we might ask why later instances of Merge cannot assign θ-roles.

(Hornstein et al. 2005: 54)

- Assignment of θ-roles must occur locally, within a projection of the head that assigns them.

See the handout on bare phrase structure.

- This is thought to fall out, in part, from the Strong Endocentricity Thesis.
- Under our current assumptions, θ-roles are generally assigned by V to its complement and specifier, and by v to its specifier.
  - θ-roles are also likely assigned in the nominal domain, though we did not talk about this at length.
  - The mechanisms by which this occurs are assumed to be the same.
- V assigns internal roles (like Patient/Theme and Goal) to its arguments. "Little" v assigns Agent to its argument.
  - There are probably other vs out there; for instance, one that assigns the experiencer role in some predicates.

In other words, this can be extended to other kinds of thematic roles, including some optional ones.

5 Case assignment

- We have gone through a couple revisions here.
- DPs (or more perhaps neutrally, nominals) enter the derivation with (unvalued) uninterpretable Case features.

  - This is distinct from the GB idea that DPs entered the derivation with no Case feature at all.

The view we have now is thus a hybrid of the GB view and the earlier idea that DPs enter the derivation fully specified for Case.

- These features are valued by entering into an Agree relation with T, *v*, P, or C.
  - The assigning heads never express Case morphology, so the assumption is that they themselves do not bear Case features.
  - Case checking is instead a reflex of valuing the uninterpretable ϕ-features of the probe.

- Different heads assign different Cases:
  - Finite T assigns nominative.
  - Transitive *v* and non-finite C *for* assign accusative Case.
  - Prepositions assign various oblique Cases. In English, this is probably only accusative.

We have not discussed this, but it is generally assumed that D assigns genitive Case.

- The proper way to treat PRO has been a point we've discussed a view times.
  - So far, we have assumed that PRO does receive Case.
  - Unlike other elements, it must be assigned null Case from non-finite *to*.
  - We must therefore assume that there is a degree of lexical specification with regard to what Case values some lexical items can receive.

6 Agree and feature interpretability

6.1 Feature interpretability

- We have adopted a distinction between interpretable and uninterpretable features.
  - Interpretable features are legible at the LF interface, and consequently need not – and cannot – be checked.
  - Uninterpretable features are not legible at the LF interface and must be checked for the derivation to converge.

- Under this view, features that express agreement with some other syntactic element are uninterpretable.

6.2 Agree

- We have adopted the Agree view of feature checking. Under this view, the operation Agree is the only mechanism by which features may be checked.
  - There is no covert movement in this system.

- On this view, only interpretable features enter the derivation fully specified. Uninterpretable features receive their values over the course of the derivation.
- Agree checks uninterpretable features and assigns them values.
  - An uninterpretable feature on a head is a PROBE.
  - The probe searches its c-command domain for a GOAL, a head bearing a matching feature and at least one unchecked uninterpretable feature.
  - Agree copies the value of the goal to the probe and checks it, rendering it inert for the LF interface.
  - Uninterpretable features can also be checked by merging material from the numeration. We saw this specifically in our discussion of the expletive *there*.

We did not discuss them, but in some lexicalist theories that do not assume Agree uninterpretable features trigger movement (either overt or covert). Interpretable features do not trigger movement.

7 Movement

7.1 Motivation

- Under this system, movement is *the result* of checking a strong feature.
- Movement itself is not responsible for checking features.
  - Only Agree can check features.
  - As such, Agree replaces movement for spec–head checking.
- Because only Agree can check features, and because we still think movement is related to feature checking, it follows that movement only occurs as the result of an Agree relation.
  - Movement will only occur when Agree enters into a relation with a strong feature.
  - A head or phrase bearing a strong feature must be copied into the domain of the head it agrees with.
- This leave totally open what it means to be a strong feature, however.

As a consequence, covert movement for feature checking is no longer necessary and eliminated from the theory.

7.2 The copy theory of movement

- We have eliminated Move as an operation in the syntax. The effect of movement is instead derived by a different means:
  - A new operation Copy creates a new copy of material that is already merged in the tree that you want to 'move'.
  - This copy is then merged elsewhere in the tree, using the independently motivated operation Merge.
  - Additional copies are eliminated at the interfaces via CHAIN REDUCTION.

- The Chain Reduction operations behaves differently at each level of representation.
  - Chain Reduction at PF determines which copy (or copies) will be pronounced. This appears to rely, to some extent, on morphological and phonological concerns.
  - Chain Reduction at LF determines where specific subparts of the copies will be interpreted. Unlike at PF, Chain Reduction at LF need not eliminate full copies.
- The upshot of all of this is that traces can be eliminated from our representations, in accordance with the Inclusiveness Condition which demands that derivations proceed only with material drawn from the numeration.

8 Binding

- We still assume the traditional three binding conditions from GB.
- The way that binding interacts with movement, however, relies on insights from the Copy Theory of Movement.
  - Rather than mediating binding through various traces, different copies can be interpreted for the purposes of the binding theory.
- Copies are reduced at LF in accordance with the Preference Principle.

(7) *Preference Principle*:
Try to minimize the restriction in the operator position.

- In cases of A′-movement, this allows the *wh*-element to be interpreted in a high position, while the material it pied-pipes on the surface is interpreted in its base position.
  - This explains the lack of flexibility in the interpretation of pronouns under Principle B.
  - It explains why Principle C effects are observed even when an R-expression is moved out a position where it is c-commanded by another referring element.
  - Due to specifics about the structure of reflexive pronouns, Principle A can get around the Preference Principle, allowing for the reflexive to be interpreted in more than one place!

However, for reasons having to do with economy and the Inclusiveness Condition, we redefined them in terms of coreference rather than coindexation.

However, this analysis relied on covert A-movement of the reflexive to the binder; see the handout on Principles B & C. It is not clear how this analysis can be refit under the Agree theory!

9 Minimality

- In general, it is thought that one element should not be able to move across another element of the same type.

- We developed the idea of Relativized Minimality, which prevents moving an element X over a filled position P that could have been occupied by X if P were empty.
- Within this system, one element may move over an occupied position if they are considered equidistant – within the same Minimal Domain:

Chomsky 1995, Ch. 4

(8) *Equidistance*:
If two positions α and β are in the same MinD, they are equidistant from any other position.

(9) *Minimal Domain (MinD)*:
The Minimal Domain of α, or MinD(α), is the set of categories immediately contained or immediately dominated by projections of the head α, excluding projections of α.

- Under Minimalism, it is assumed that minimality is relativized to features.
- Further, since movement is now triggered by Agree, minimality must therefore be a condition on Agree.
  - This means that a probe will always enter into a relationship with the nearest goal and cannot probe past these to lower ones.
  - This also means that a probe should be able to Agree with any goal in the same MinD.

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